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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/082,988	02/26/2002	Douglas Alan Miller	45568-00210	7053

25231 7590 12/06/2005

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EXAMINER

NI, SUHAN

ART UNIT	PAPER NUMBER
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2646

DATE MAILED: 12/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/082,988	<b>Applicant(s)</b> MILLER ET AL.	
	<b>Examiner</b> Suhan Ni	<b>Art Unit</b> 2646	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 14 July 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) 35-42 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All   b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 2646

### **DETAILED ACTION**

1. The Art Unit location of your application in the PTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Group **Art Unit 2646**.
2. This communication is responsive to the provisional election made without traverse on 07/14/2005 to prosecute the invention of Group I, claims 1-34. Group II, claims 35-42 are withdrawn from further consideration, as being drawn to a non-elected invention. A complete reply to a future final office action must include cancellation of non-elected claims or other appropriate action (37 CFR 1.144). See MPEP § 821.01.

### ***Specification***

3. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

4. Claims 17-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 17, it recites the limitation "the method" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Regarding claim 17, it recites the limitation “the step” in line 1. There is insufficient antecedent basis for this limitation in the claim.

Regarding claim 18, it recites the limitation “the test signal” in line 2. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) The invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

5. Claims 15-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Goodings et al. (U. S. Pat. - 5,259,033).

Regarding claim 15, Goodings et al. disclose a method of compensating for changing characteristics of frequency responses generated by a microphone (5) in response to an acoustic input in a hearing aid, the method comprising: conducting a test session (33) to determine changes in the frequency responses of the microphone; generating at least one test parameter (31) representative of the changes in the frequency responses of the microphone; and using the at least one test parameter to generate drive signals (15, 19, 9) for a transducer (11) that compensate for the changes in the frequency responses of the microphone as claimed.

Regarding claim 16, Goodings et al. further disclose the method, wherein the step of conducting the test session comprises the steps of: generating and providing a test signal (33) to a transducer (11); driving the transducer with the test signal to generate acoustic feedback (W);

Art Unit: 2646

detecting the acoustic feedback in the microphone (5); generating a feedback frequency response in the microphone; and comparing the feedback frequency response with the test signal to determine the at least one test parameter (3) as claimed.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-14 and 18-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goodings et al. (U. S. Pat. - 5,259,033).

Regarding claims 1 and 23, Goodings et al. disclose a hearing aid, comprising: a transducer (11) to stimulate a component of an auditory system; a microphone (5) to process acoustic sounds and generate frequency responses representative of the acoustic sounds; and a signal processor (3) to process at least one feedback frequency response (W) from the microphone to generate at least one test parameter and use the at least one test parameter to determine at least one operational characteristic of the microphone, wherein the feedback frequency response is generated by the microphone in response to acoustic feedback generated in response to at least one test signal (33) provided to the transducer. But Goodings et al. do not clearly teach that the transducer is implantable within a patient as claimed. Since providing one or more suitable implantable transducer for a patient is very well known in the art, it therefore would have been obvious to one skilled in the art at the time the invention was made to be

motivated to provide suitable implantable transducer for a patient using the hearing aid, in order to provide better sound delivery for certain hearing aid users, under certain circumstances.

Regarding claims 2-7, 24-26, 28-29 Goodings et al. further disclose the hearing aid, comprising a test signal generator (33) to generate and provide the at least one test signal to the transducer (11), wherein the at least one test signal causes the transducer to stimulate the component of the auditory system and generate the acoustic feedback sound (W) as claimed (Fig. 1).

Regarding claims 8-9, Goodings et al. further disclose the hearing aid, wherein the at least one operational characteristic of the microphone (10, 11) comprises: changing characteristics of acoustic frequency responses of the microphone generated in response to the acoustic sounds as claimed.

Regarding claims 10-13, 19-22, 30-33, Goodings et al. do not clearly teach a delta frequency for the test signal as claimed. Since Goodings et al. do not specially restrict to the injected noise signal, and providing a suitable noise for testing the hearing aid is very well known in the art, it therefore would have been obvious to one skilled in the art at the time the invention was made to be motivated to provide suitable testing noises to the hearing aid, such as injecting noise with delta frequency, in order to provide a hearing aid having more desirable acoustic characteristics, such as low noises, especially for specific users.

Regarding claims 14 and 34, Goodings et al. further discloses the hearing aid, wherein the signal processor is a digital signal processor (3).

Regarding claims 18 and 27, Goodings et al. do not clearly teach multi-frequencies test signal as claimed. Since Goodings et al. do not specially restrict to the injected noise signal, and

providing suitable noises for testing the hearing aid is very well known in the art, it therefore would have been obvious to one skilled in the art at the time the invention was made to suitable testing the hearing aid, such as injecting more than one noises, in order to provide a hearing aid having more desirable acoustic characteristics, such as low noises, especially for a specific user.

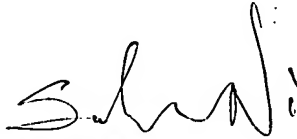
***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Suhan Ni** whose telephone number is **(571)-272-7505**, and the number for fax machine is **(571)-273-7505**. The examiner can normally be reached on Monday through Thursday from 10:00 am to 8:00 pm. If it is necessary, the examiner's supervisor, **Sinh N. Tran**, can be reached at **(571)-272-7564**.

8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (**PAIR**) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov/>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

9. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is **(571)-272-2600**, or please see <http://www.uspto.gov/web/info/2600>.

November 30, 2005

  
**SUHAN NI**  
**PRIMARY EXAMINER**